UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

September 29, 2003

Walter Buettner
MWH
175 W. Jackson Blvd
Suite 1900
Chicago, Illinois 60604

Dear Mr. Buettner:

I have reviewed the June 9, 2003, "Response to Comments, LFG Trigger level Report, Blackwell Forest Preserve Site" and have the following comment(s). Rick Lanham of the Illinois Environmental Protection Agency has also reviewed the document and had no additional comments:

1) It is still unclear to me what type of monitoring would be performed in areas of uncontrolled LFG emissions after regrading is performed. The text seems to indicate that after regrading visual and olfactory observation will be used to assess whether the regrading was effective in controlling the emissions. Since visual inspection would only be effective under moist conditions to detect the bubbling gases its possible significant time could pass before you could assess the effectiveness. Ambient air monitoring should be performed after the construction to assure the repairs were successful in control the emissions.

2) Page 5, Response 4: Because of the potential immediate dangers of trigger level exceedances for methane, and the length of time it might take to resample, it would seem appropriate to close off access to the top of the hill until resampling can take place. Also, the assumption you are making is that if the second sampling comes back lower than the trigger level then no action is appropriate. Its possible that intermittant exceedances could be occurring, putting the public at risk. Further investigation, i.e. more than one confirmatory sampling event , seems necessary to assess the original exceedance.

3) Revised U.S. EPA PRG and RBC Concentrations: While, for purposes of this exercise I can entertain the concept of conservatism factors in assessing site-specific risk assessment parameters such as residential vs recreation exposure frequencies, I cannot accept the concept for things such as reasonable maximum exposure versus average exposure (RME), or the weighting of the vinyl chloride RBC heavier toward children. The underlying assumption is that if we performed a full fledged risk assessment , then the input values we would use would reflect the conservatism factors you've proposed, resulting in higher trigger levels. We do not agree. As policy the Agency believes that the RME is the scenario upon which risk is evaluated and decisions based.

This would not change in a new risk analysis or the development of site specific trigger levels. The purpose of the trigger levels is to develop some concentration upon which action should be taken, and that concentration needs to include some margin of safety. The Agency believes that the RME is one of the appropriate means to address the uncertainty of risk assessment and sees no reason why that wouldn't apply here. A conservatism factor is not appropriate for the RME.

4) Whether to weigh children more heavily would need to be done in the context of a risk assessment and involve discussions with a toxicologist. In developing the vinyl chloride RBC of 0.072 ug/m3 the U.S. EPA obviously believed it appropriate to rely on the more conservative approach weighing more heavily on the children's exposure. You have not provided any rationale for your belief that the more conservative approach is not appropriate other than it is different from the method used to develop other RBCs. The purpose of your discussion here is to develop trigger levels without engaging in a full fledged risk assessment exercise. Determining whether or not to weigh children more heavily in the vinyl chloride calculation is something that cannot be dealt with in the context of this exercise and we instead should default to the RBC as developed and not apply a conservatism factor.

3) MWH wants to assume that peoples' exposure will be averaged over the entire surface of the landfill; the model assumes they will be exposed to the maximum concentration for the duration. The reality is probably some where in the middle. Each approach is simplistic. Assuming people spend equal amounts of time in each area of the landfill is not supported. The slopes on the south and east are far too steep and overgrown for the "average" recreational user to traverse. I would imagine that in all likelihood the average user spends most of their time on the top of the hill or on the tubing run. Either data should be presented specifically assessing exposure frequency on the landfill, or we must rely on the maximum exposure as used in the model as a conservative, and protective, approach. As it stands now the averaging scenario is unsupported and the conservatism factor of 73 is inappropriate.

3) In reviewing the discussions concerning the uncertainty factors built into the RBCs and PRGs it became apparent that one factor has not been dealt with in the application of these numbers to this situation. The RBCs, and the PRGs, are intended for use when only one contaminant is present, and not for situations involving mixtures as we have with the LFG. Having two or more contaminants below the trigger levels that have been proposed may constitute an unacceptable risk because of their additive risk, yet trigger no action under your plan. The PRG development must take the additive risk of these compounds into account.

Please give me a call to discuss these issues, or any concerns you might have related to his review. We can also discuss the time frame for the submittal of a revised report.

Sincerely,

Tim Prendiville
Remedial Project Manager